

CONDITIONS OF USE
Backfill = 0 to 4 feet
Surcharge = 120 psf
Soil EFP = 60

Total length of wall _____ ft.

- * For frost protection, a 2 ft. backfill is recommended.
- * Dimensions are to the reinforcing bar surface.

ESTIMATED QUANTITIES

Concrete	(0.25 cu. yds./lin. ft.)	_____ cu. yds.
Steel	(26.6 ft./lin. ft.)	_____ ft.
Steel	(35.0 ft./corner)	_____ ft.

- * Concrete will meet Oregon Construction Specification 41.
- * Minimum splice length for all #4 bars is 16 inches.
- * Steel quantity does not include splice lengths.
- * Substitution of grade 60 bars is permitted.

DESIGN NOTES

- * Drainage shall be away for the wall.
- * The minimum top width of the backfill against the wall shall be equal to or greater than the backfill height.
- * Maximum footing contact pressure is 710 psf/ft.

DESIGN STRENGTH: Working stress design

Concrete $f_c = 3,500$ psi $f_c = 1,400$ psi $f_s = 20,000$ psi (40 grade)

WALL DESIGN LOADING: 313 Standard – Lateral earth pressure valves (See

Section IV of the Field Office Technical Guide)

- * Manure load inside = 65 psf/ft
- * Soil backfill load outside = 60 psf/ft
- * 120 psf horizontal surcharge of a 2:1 sloping backfill is allowed
- * Soil backfill density = 100 pcf

WALL RESTRAINT REQUIREMENTS:

5 inch thick slab, safety factor against sliding 1.5 minimum

Backfill height (outside load)	Slab length (no inside load)	Lab length (full inside load)
4 ft	39 ft	no slab
3 ft	22 ft	no slab
2 ft	9 ft	no slab
1 ft	no slab	2 ft **
0 ft	no slab	2 ft **

** Minimum slab length of 2 feet required and must be tied into the wall footing.

Slab poured with wall footing:

#3 bars @ 18" spacing (minimum reinforcement)

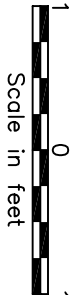
Slab not poured with wall footing:

#3 dowel bars – 3'-0" length @ 8'-0" spacing.

This drawing requires supporting technical documentation prior to use and must be adapted to the specific site.



SECTION

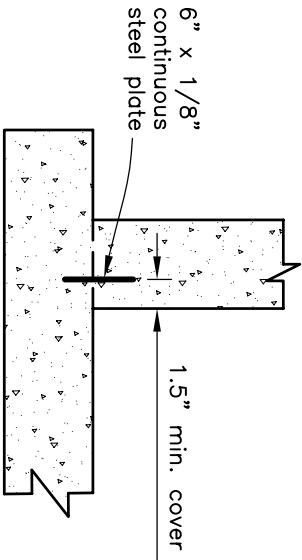


TYPE 2 BAR

STEEL SCHEDULE

MARK	SIZE	QUAN	TYPE	R	S	LENGTH	TOTAL LENGTH
A	4		STR	---	---	5'-0"	
B	4		STR	---	---		
* C	4		2	2'-0"	9"	2'-9"	
* D	4		STR	---	---	3'-9"	
L	4		2	2'-0"	9"	2'-9"	
L1	4		STR	---	---	3'-9"	
#4 bars, TOTAL LENGTH							

- * Mark C & D bars may be combined to avoid splice. Then Mark C bar is 4'-3" x 9"
- Mark L & L1 bars not shown – see wall corner detail.



CONSTRUCTION JOINT OPTIONS

- * Sandblasting or air-water cutting
- * Steel plate

4 FOOT WALL WITH SURCHARGE

ANIMAL WASTE



Date	3/2005
Designed	_____
Drawn	_____
Checked	_____
Approved	_____
Title	_____

File Name	or_4ft_wall_surcharge.dwg
Drawing No.	
Sheet	of